



September 11, 2019

Arcelor Mittal USA, Inc.  
250 W US Highway 12  
Burns Harbor, IN 46304-9745

Work Order No.: 19H1217

Re: NPDES Parameters

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 3 sample(s) on 8/20/2019 10:50:00AM for the analyses presented in the following report as Work Order 19H1217.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Ron Misiunas, Division Manager, at [ron.misiunas@microbac.com](mailto:ron.misiunas@microbac.com).

Sincerely,  
Microbac Laboratories, Inc.

A handwritten signature in black ink that reads "Carey Gadzala". The signature is written in a cursive, flowing style.

Carey Gadzala  
Project Manager

[Microbac Laboratories, Inc.](http://www.microbac.com)

250 West 84<sup>th</sup> Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | [www.microbac.com](http://www.microbac.com)



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**WORK ORDER SAMPLE SUMMARY****Date:** *Wednesday, September 11, 2019*

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**Client:** Arcelor Mittal USA, Inc.  
**Project:** NPDES Parameters  
**Lab Order:** 19H1217

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<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Collection Date</b>	<b>Date Received</b>
19H1217-01	001-Composite	001	08/19/2019 00:00	8/20/2019 10:50:00AM
19H1217-02	011-Composite	011	08/19/2019 00:00	8/20/2019 10:50:00AM
19H1217-03	002-Composite	002	08/19/2019 00:00	8/20/2019 10:50:00AM

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## Field Results

Date: *Wednesday, September 11, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order:</b>	19H1217
<b>Client Project:</b>	NPDES Parameters		
<b>Client Sample ID:</b>	001-Composite	<b>Work Order/ID:</b>	19H1217-01
<b>Sample Description:</b>	001	<b>Sampled:</b>	08/19/2019 00:00
<b>Matrix:</b>	Aqueous	<b>Received:</b>	08/20/2019 10:50

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L

<b>Client Sample ID:</b>	011-Composite	<b>Work Order/ID:</b>	19H1217-02
<b>Sample Description:</b>	011	<b>Sampled:</b>	08/19/2019 00:00
<b>Matrix:</b>	Aqueous	<b>Received:</b>	08/20/2019 10:50

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L

**CASE NARRATIVE****Date:** *Wednesday, September 11, 2019*

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**Client:** Arcelor Mittal USA, Inc.  
**Project:** NPDES Parameters  
**Lab Order:** 19H1217

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The Total Suspended Solid method residue requirement of 2.5 mg were not met for the following sample(s). Due to insufficient sample volume remaining, re-analysis was not performed on the sample(s).

<u>Laboratory ID</u>	<u>Sample Name</u>
19H1217-01	001
19H1217-02	Outfall 011

Samples in this work order are logged in per the COC submitted. The composite samples that were submitted NH<sub>4</sub>, TSS, Phenol, Cn, Pb and Zn should have a collection date of 8/19/19. The Grab samples Oil & Grease and Chlorine are the correct date 08/19/19.

Report has been revised at the clients request to include Cu and Ag for Outfall 001. 9/11/19

## Analytical Results

Date: Wednesday, September 11, 2019

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1217-01
<b>Client Project:</b>	NPDES Parameters	<b>Sampled:</b>	08/19/2019 0:00
<b>Client Sample ID:</b>	001-Composite	<b>Received:</b>	08/20/2019 10:50
<b>Sample Description:</b>	001		
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: EPA 200.7 Rev 4.4

Analyst: RPL

### Total Recoverable Metals by ICP

Prep Date/Time: 08/20/2019 12:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Copper	ejj	A	0.0024	0.0013	0.010		mg/L	1	08/20/2019 14:43
Lead	ejj	A	ND	0.0033	0.0075	U	mg/L	1	08/20/2019 14:43
Zinc	ejj	A	0.015	0.0073	0.020		mg/L	1	08/20/2019 14:43

Method: EPA 200.8 Rev 5.4

Analyst: BTM

### Total Recoverable Metals by ICP/MS

Prep Date/Time: 09/08/2019 12:49

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Silver	ejj	A	ND	0.000053	0.00060	U	mg/L	1	09/09/2019 11:47

Method: EPA 1664B

Analyst: KMT

### Oil & Grease (HEM) by SPE

Prep Date/Time: 08/20/2019 11:35

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	08/20/2019 14:34

Method: SM 4500-CN C/E-1999

Analyst: ABG

### Total Cyanide

Prep Date/Time: 08/20/2019 11:49

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Cyanide, Total	ejj	A	ND	0.0020	0.0050	U	mg/L	1	08/20/2019 14:14

Method: EPA 350.1 Rev 2.0

Analyst: EF

### Nitrogen, Ammonia as N

Prep Date/Time: 08/20/2019 15:30

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Nitrogen, Ammonia (As N)	ei	A	0.46	0.054	0.10		mg/L	1	08/20/2019 17:49

Method: EPA 420.4 Rev 1.0

Analyst: ABG

### Total Phenolics

Prep Date/Time: 08/20/2019 14:01

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Phenolics, Total Recoverable	ejj	A	0.0082	0.0060	0.010		mg/L	1	08/20/2019 15:54

Method: SM 2540 D-1997

Analyst: KMT

### Total Suspended Solids

Prep Date/Time: 08/20/2019 11:40

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Total Suspended Solids	ejj	A	ND	1.0	1.0	U	mg/L	1	08/20/2019 13:15

## Analytical Results

Date: Wednesday, September 11, 2019

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1217-02
<b>Client Project:</b>	NPDES Parameters	<b>Sampled:</b>	08/19/2019 0:00
<b>Client Sample ID:</b>	011-Composite	<b>Received:</b>	08/20/2019 10:50
<b>Sample Description:</b>	011		
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 200.7 Rev 4.4			Analyst: RPL			
<b>Total Recoverable Metals by ICP</b>						Prep Date/Time: 08/20/2019 12:00			
Lead	ejj	A	ND	0.0033	0.0075	U	mg/L	1	08/20/2019 14:48
Zinc	ejj	A	0.010	0.0073	0.020		mg/L	1	08/20/2019 14:48
			Method: EPA 1664B			Analyst: KMT			
<b>Oil &amp; Grease (HEM) by SPE</b>						Prep Date/Time: 08/20/2019 11:35			
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	08/20/2019 14:34
			Method: SM 4500-CN C/E-1999			Analyst: ABG			
<b>Total Cyanide</b>						Prep Date/Time: 08/20/2019 11:49			
Cyanide, Total	ejj	A	0.0026	0.0020	0.0050		mg/L	1	08/20/2019 14:16
			Method: EPA 350.1 Rev 2.0			Analyst: EF			
<b>Nitrogen, Ammonia as N</b>						Prep Date/Time: 08/20/2019 15:30			
Nitrogen, Ammonia (As N)	ei	A	0.34	0.054	0.10		mg/L	1	08/20/2019 17:56
			Method: EPA 420.4 Rev 1.0			Analyst: ABG			
<b>Total Phenolics</b>						Prep Date/Time: 08/20/2019 14:01			
Phenolics, Total Recoverable	ejj	A	0.011	0.0060	0.010		mg/L	1	08/20/2019 15:59
			Method: SM 2540 D-1997			Analyst: KMT			
<b>Total Suspended Solids</b>						Prep Date/Time: 08/20/2019 11:40			
Total Suspended Solids	ejj	A	2.2	1.0	1.0		mg/L	1	08/20/2019 13:15

## Analytical Results

Date: Wednesday, September 11, 2019

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1217-03
<b>Client Project:</b>	NPDES Parameters	<b>Sampled:</b>	08/19/2019 0:00
<b>Client Sample ID:</b>	002-Composite	<b>Received:</b>	08/20/2019 10:50
<b>Sample Description:</b>	002		
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
				Method: EPA 1664B			Analyst: KMT		
<b>Oil &amp; Grease (HEM) by SPE</b>									
Prep Date/Time: 08/20/2019 11:35									
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	08/20/2019 14:34
				Method: SM 4500-CN C/E-1999			Analyst: ABG		
<b>Total Cyanide</b>									
Prep Date/Time: 08/20/2019 11:49									
Cyanide, Total	ejj	A	ND	0.0020	0.0050	U	mg/L	1	08/20/2019 14:18

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**ANALYTE TYPES: (AT)**

A, B = Target Analyte

I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)



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**QC SAMPLE IDENTIFICATIONS**

BLK = Method Blank

DUP = Method Duplicate

BS = Method Blank Spike

MS = Matrix Spike

ICB = Initial Calibration Blank

CCB = Continuing Calibration Blank

CRL = Client Required Reporting Limit

PDS = Post Digestion Spike

QCS = Quality Control Standard

ICSA = Interference Check Standard "A"

ICSAB = Interference Check Standard "AB"

BSD = Method Blank Spike Duplicate

MSD = Matrix Spike Duplicate

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

OPR = Ongoing Precision and Recovery Standard

SD = Serial Dilution

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**CERTIFICATIONS (Certs)**

*Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.*

d Illinois EPA drinking water, wastewater and solid waste analysis (#200064)

i Kansas Dept Health &amp; Env. NELAP (#E-10397)

j Kentucky Wastewater Laboratory Certification Program (#108202)

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**FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)****MDL:** Minimum Detection Limit**RL:** Reporting Limit**RPD:** Relative Percent Difference**U:** The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

## Cooler Receipt Log

Cooler ID: Default Cooler

Temp: 3.0°C  
 MICROBAC®

### Comments

No time

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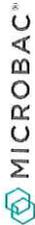
### Cooler Inspection Checklist

Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	Yes
Correct number of containers listed on COC?	No
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	No
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes

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# RUSH!

CHAIN OF CUSTODY RECORD

Number **152327**  
Instructions on back

Lab Report Address

Client Name: *Arcelor in the BH*

Address:

City, State, Zip:

Contact: *Tami Kirk*

Telephone No.:

Send Report Via:  Mail  Fax  e-mail (address)

Turnaround Time

Routine (5 to 7 business days)  
 RUSH\* (notify lab)

Holding Time

(needed by)

Report Type

Results Only  Level 1  Level 2  Level 3  Level 4  EDD  
 Mail  Fax  e-mail (address)

TO BE COMPLETED BY MICROBAC

Temperature Upon Receipt (°C) *33.3*  
Therm ID *303730*

Samples Received on Ice?  Yes  No  N/A

Custody Seals Intact?  Yes  No  N/A

Project:

Location:

PO No.:

Compliance Monitoring?  Yes  No

Agency/Program

Sampler Signature: *Warren Howard* Sampler Phone No.:

\* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

\*\* Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

19H1217 Carey Gadzala  
ArcelorMittal - Burns Harbor, IN  
NPDES Parameters  
08/20/2019

REQUESTED ANALYSIS

Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	Analysis	Additional Notes
001	8/20/19						Phenol	19H1217
011							Zn	
002							Cyanide	
							Fog	
							Chlorine	

Possible Hazard Identification

Hazardous  Non-Hazardous  Radioactive

Sample Disposition

Dispose as appropriate  Return  Archive

Comments

Relinquished By (signature) *[Signature]*

Date/Time 8/20/19 0800

Received By (signature) *[Signature]*

Date/Time 8/20/19 0800

Relinquished By (signature) *[Signature]*

Date/Time 8/20/19 1050

Received By (signature) *[Signature]*

Date/Time

Relinquished By (signature) *[Signature]*

Date/Time

Received By (signature) *[Signature]*

Date/Time 8/20/19/1050